



1/6

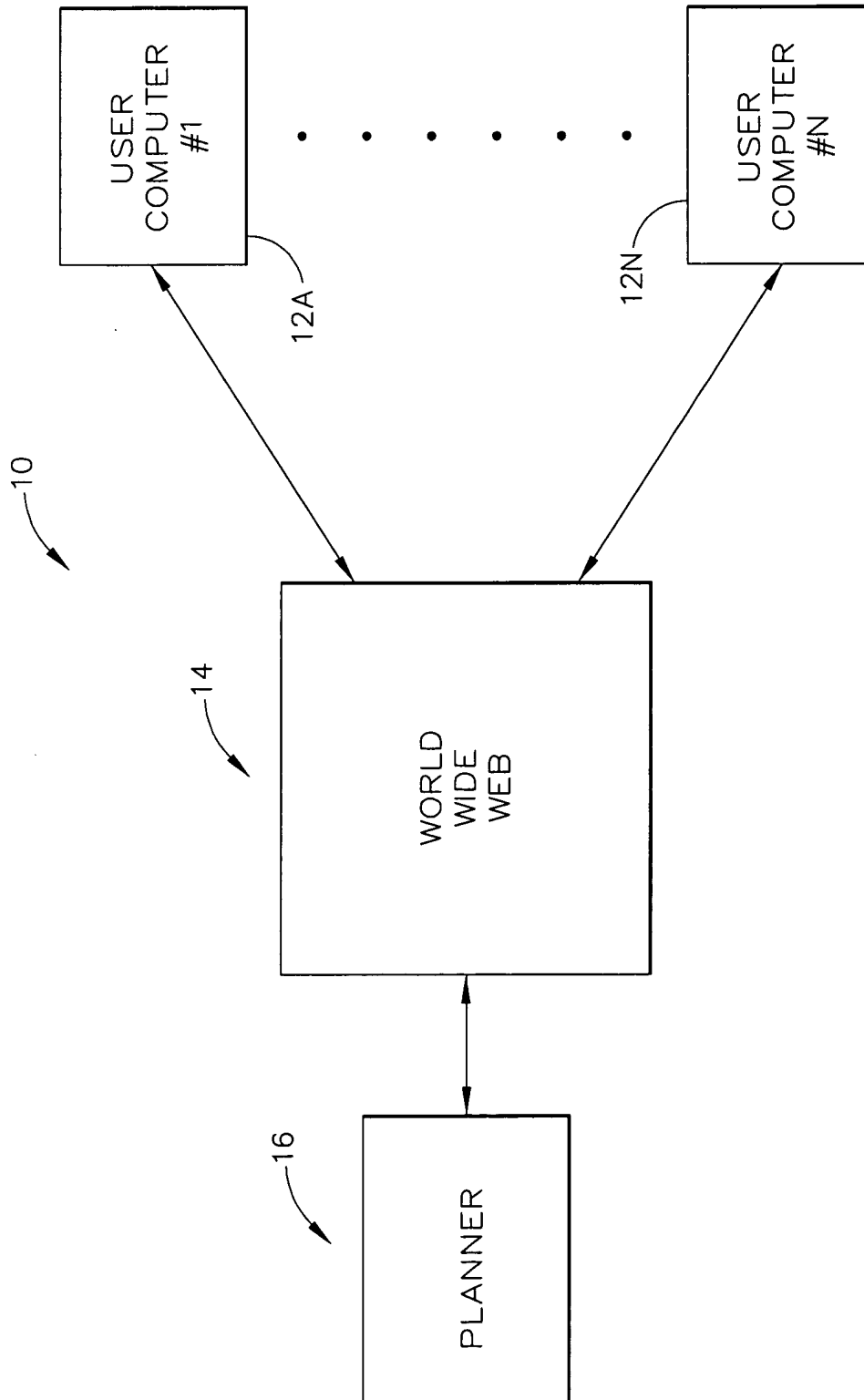


FIG. 1

2/6

18

P11TF12 CLASS	MATERIAL	EDGE BREAK TYPE
HOLE DIA.	HOLE LENGTH	NUMBER OF HOLES
DIAMETER TOL.	MIN. RAD.	NORMAL ENTRY
TRUE POSITION TOL.	COUNTERBORE DIA.	NORMAL EXIT
COUNTERBORE ?	COUNTERBORE DEPTH	

19

FIG. 2

3/6

14		21										22			
P11TF12 CLASS	1	1	NONE	A	B	C	D	E	F	G					
MATERIAL	1	2	INCO	R41	WASPALLOY	R95	R88	TITANIUM	A286	MA-250	MAR-509				
EDGE BREAK TYPE	1	3	CHAMFER	RADIUS											
SHAPED HOLE MINOR DIA.	3	1													
HOLE LENGTH	3	2													
NUMBER OF HOLES	3	3													
DIAMETER TOL.	5	1													
MIN. RAD.	5	2													
NORMAL ENTRY	5	3	YES	NO											
TRUE POSITION TOL.	7	1													
NORMAL EXIT	7	3	YES	NO											
COUNTERBORE ?	9	1	NO	YES											
COUNTERBORE DIA.	9	2													
COUNTERBORE DEPTH	9	3													

FIG. 3

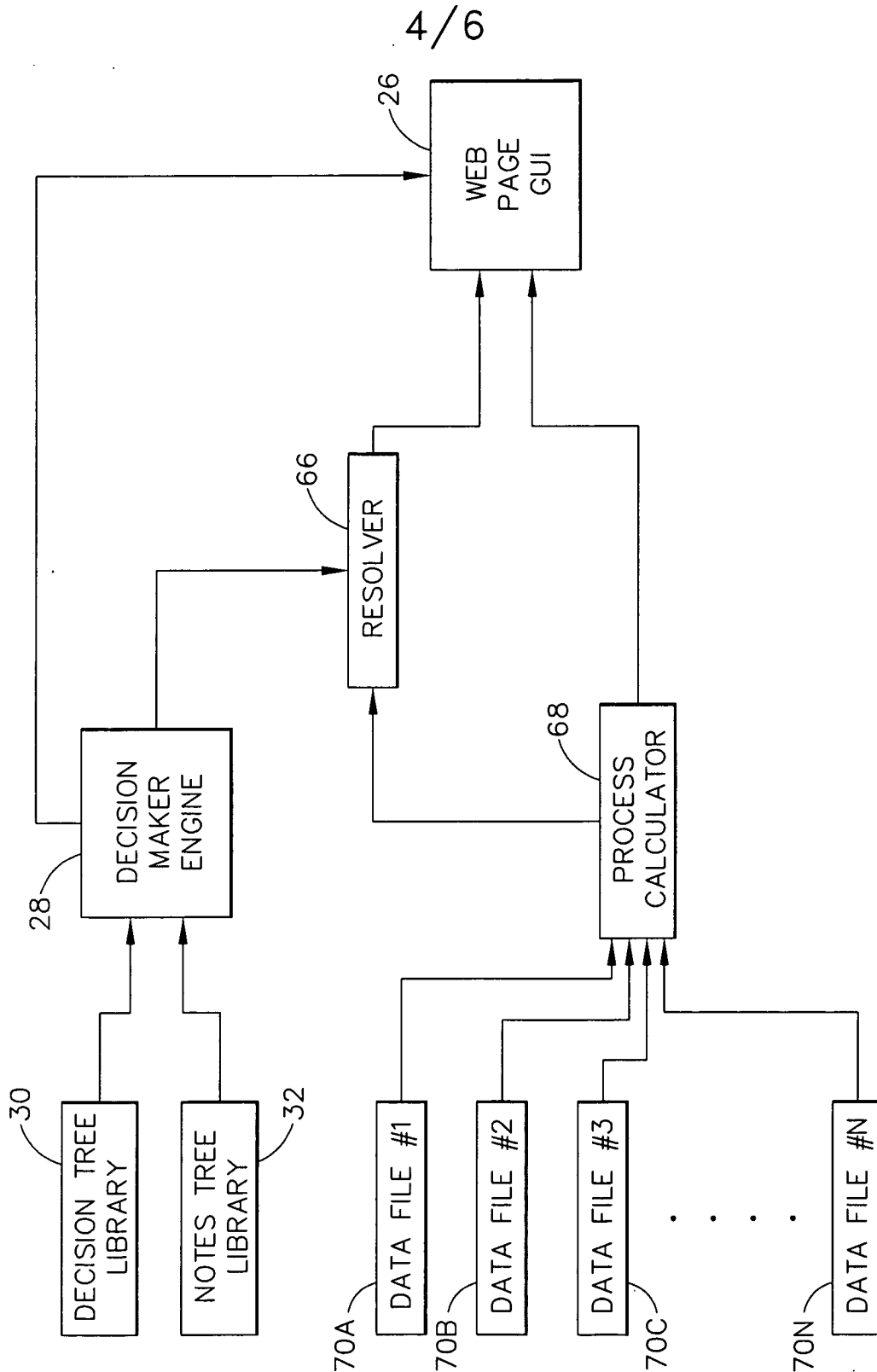


FIG. 4

5/6

36 NODE INDEX	38 TYPE	40 DESCRIPTION	42 CHARACTERISTIC	46 OPERATOR	44 VALUE	48 NEXT NODE
0	DECISION ?		NORMAL ENTRY	=	NO	1
						4
1	DECISION ?		SHAPED HOLE MINOR DIA.	<	0.52	2
						3
2	STEP	ROUGH ENDMILL				5
3	STEP	ENDMILL FLAT: SIZE=.437				4
4	STEP	ROUGH DRILL: U/SIZE=.012				5
5	STEP	FINISH PERIPHERAL MILL: U/SIZE=.005				6
6	DECISION ?		P11TF12 CLASS	=	D	7
						8
7	STEP	ABRASIVE FLOW POST-FIN: SIZE=.001 MIN				8
8	DECISION ?		COUNTERBORE ?	=	YES	9
						10
9	STEP	COUNTERBORE				10
10	STEP	CHAMFERMILL TOP AND BOTTOM				11
11	STEP	BENCH EDGEBREAK: SIZE=320 GRIT B FLY				999

FIG. 5

6/6

50 NODE INDEX	52 TYPE	54 DESCRIPTION	56 CHARACTERISTIC	60 OPERATOR	58 VALUE	62 NEXT NODE
0	NOTE	USE FLOOD COOLANT AT ALL TIMES				999
4	NOTE	USE APPROXIMATELY .050 OVERTRAVEL ON DRILL STROKE	FILEBASE	CONTAINS	THRU	999
5	NOTE	CLIMB MILL WHILE MILLING	PROCESS	CONTAINS	CHAMFER	999
6	NOTE	CLIMB MILL WHILE MILLING	PROCESS	CONTAINS	PERIPHERAL	999
7	NOTE	USE ONE SECTION OF CUTTER FLUTE FOR ROUGHING; ANOTHER FOR FINISHING	PROCESS	CONTAINS	CHAMFER	999
8	NOTE	USE ONE SECTION OF CUTTER FLUTE FOR ROUGHING; ANOTHER FOR FINISHING	PROCESS	CONTAINS	PERIPHERAL	999
9	NOTE	REVERSE FLEXHONE SPINDLE DIRECTION 1/2 WAY THRU HOLE PATTERN	PROCESS	CONTAINS	FLEXHONE	999
10	NOTE	ALTERNATE PACK DRILL CYCLE: 1/2 DIA. DEEP; RETRACT FULLY; THEN 1/10 DIA. DEEP; RETRACT FULLY; REPEAT AS REQ'D	PROCESS	CONTAINS	COOLANT FED DRILL	999
11	NOTE	COOLANT PRESSURE OF 200+ PSI RECOMMENDED FOR CF DRILLING	PROCESS	CONTAINS	COOLANT FED DRILL	999
14	NOTE	ALIGN WORKPIECE & SPINDLE ONLY AFTER RUNNING WARMUP ROUTINE FOR THIS APPLICATION	TRUE POSITION TOL.	<	0.002	999
18	NOTE	WHEN SHAPED HOLE MILLING; ROUGH W/ USED CUTTER; FINISH WITH NEW CUTTER	FILEBASE	CONTAINS	SHAPED	999
19	NOTE	CONSIDER HYDRAULIC TOOLHOLDERS FOR THIS APPLICATION	TRUE POSITION TOL.	<	0.002	999
20	NOTE	ALIGN CUTTER FLUTES W/IN .0002 INCHES BEFORE FINISH PASS	TRUE POSITION TOL.	<	0.001	999

FIG. 6